

Amendment  
Serial No. 10/792,322

**IN THE DRAWINGS**

Please replace FIG. 9 with the new FIG. 9 contained in the replacement sheet

**REMARKS**

Entry of this Amendment and reconsideration are respectfully requested in view of the amendments made to the claims and for the remarks made herein.

Claims 1-21 are pending and stand rejected. Claims 1, 6, and 16 are independent claims.

Claims 1, 16, and 16 have been amended. Claim 21 has been cancelled.

Figure 9 stands objected as allegedly containing typographical errors. In response, the Applicant submits a replacement sheet containing a new FIG. 9.

For the submittal of the replacement drawing, applicant respectfully requests that the objection be withdrawn.

Claims 1-5 and 16-20 stand rejected under 35 USC §112, first paragraph for failing to comply with the written description.

Applicant respectfully disagrees with and explicitly traverses the reason for rejecting the claims. However, the claims have been amended to remove the language regarding channels of noise and replace this expression by "mode-partition noise." This expression is consistent with the language in the specification (see page 2, line 22-page 3, line 3).

Accordingly, for the amendments made to claims 1 and 16, the rejection has been overcome and applicant respectfully requests that the rejection be withdrawn.

Claims 2-5 and 17-20 depend from claims 1 and 16, respectively, were rejected for being dependent upon a rejected claim. Thus, for the amendments made to claims 1 and 16, the rejection of claims 2-5 and 17-20 has been overcome and applicant respectfully requests that the rejection be withdrawn.

Claims 1, 2, 4, 5, 16, 17, 19 and 20 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Lee *et al.* (U.S. Pub. 2003/0142978) ("Lee1") in view of Lee *et al.* (U.S. Pub. 2001/0004290) ("Lee2") and further in view of Watanabe (U.S. 6,847,758) ("Watanabe").

Applicant respectfully disagrees with and explicitly traverses the reason for rejecting the claims.

However, the claims have been amended to recite "**said intensity of the mode-partition noise is increased and rendered substantially constant.**" Support for this amendment may be found at least on page 6, lines 14-16 and in Figure 6.

The Lee1 and Watanabe reference were recited by the Examiner in rejecting the claims in

the prior Office Action and the Lee2 reference is being introduced to show that mode-partition noise was known in the art at the time of the Lee 1 reference and, thus, was inherent in the Lee 1 reference. The Examiner, in response to the amendments made to the claims in our prior response, further refers to Watanabe as teaching an SOA operating in a gain saturation state and that the waveform distortion and the amplitude fluctuation near the peak of each pulse can be suppressed and that signal variation in the input signal can be reduced. The Examiner further refers to Figures 5-12 of Watanabe for showing the reduction of the amplitude variation of the light source due to the SOA under a gain saturation driving condition and that the intensity noise of a signal channel is suppressed.

However, contrary to the teachings of Watanabe, the instant invention describes the noise as increasing (see page 6, lines 15-16). Nowhere do any of the references describe an increased noise component.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met, 1. there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings, 2. there must be a reasonable expectation of success; and 3. the prior art reference must teach or suggest all the claim limitations.

In this case, a *prima facie* case has not been made as each of the elements recited in the claims 1 and 16 are not disclosed by the combination of Lee1, Lee2 and Watanabe.

Accordingly, for the amendments made to claims 1 and 16 the rejection has been overcome and Applicant respectfully requests that the rejection be withdrawn.

The remaining claims depend from claims 1 and 16, respectively, and were rejected for being dependent upon a rejected claim. Thus, for the amendments made to claims 1 and 16, the rejection of the remaining claims has been overcome and Applicant respectfully requests that the rejection be withdrawn.

Claims 6 and 10-15 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Lee1 in view of Joo *et al.* (U.S. Pub. 2002/00141046) ("Joo") and further in view of Watanabe.

Applicant respectfully disagrees with and explicitly traverses the reason for rejecting the claims. However, claim 6 has been amended to recite the element "**wherein a noise intensity in each of said upstream and downstream optical signals is increased and rendered**

**substantially constant.**" No new matter has been added. Support for the amendment may be found at least in claim 1.

In this case, the combination of Lee1, Joo and Watanabe does not render obvious the subject matter claimed in claim 6 as Lee1 fails to teach noise components without the teaching of Lee2 and neither Joo nor Watanabe discloses increasing the noise component.

Accordingly, for the amendments made to claim 6, the rejection has been overcome and Applicant respectfully requests that the rejection be withdrawn.

The remaining claims depend from claim 6, and were rejected as being dependent upon a rejected claim. Thus, for the amendments made to claim 6, the rejection of the remaining claims has been overcome and Applicant respectfully requests that the rejection be withdrawn.

Claims 7 and 21 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Lee1 in view of Joo and further in view of Watanabe.

Applicant respectfully disagrees with and explicitly traverses the reason for rejecting the claims. Claim 7 depends from claim 6 and that for the arguments presented with regard to claim 6, claim 7 is also not rendered obvious in view of the cited references. Claim 21 has been cancelled, and, hence, the rejection is no longer applicable.

Accordingly, for the amendments made to claim 6, the rejection of claim 7 has been overcome and Applicant respectfully requests that the rejection be withdrawn.

Claims 3 and 18 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Lee1 and Lee2 in view of Kim *et al.* ("A low-cost WDM Source with an ASE injected Fabry-Perot Semiconductor Laser.").

Applicant respectfully disagrees with and explicitly traverses the reason for rejecting the claims. Claims 3 and 18 depend from claims 1 and 16, respectively, and claims 1 and 16, as amended, include subject matter not recited in Lee1 and Lee2 [and Watanabe]. Kim fails to provide any teaching to correct the deficient found in the combination of Lee1, Lee2 and Watanabe. Hence, the subject matter recited in claims 3 and 18 is not rendered obvious by Lee1, Lee2, [Watanabe] and Kim because all the elements recited in the claims are not found in the cited references.

Accordingly, for the amendments made to claims 1 and 16, the rejection of claims 3 and

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18 have also been overcome and Applicant respectfully requests that the rejection be withdrawn.

Claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Lee1 and Joo and Watanabe and Lee2 as applied to claims 6 and 7 and further in view of Deng *et al.* (US 2002/0196491).

Applicant respectfully disagrees with and explicitly traverses the reason for rejecting the claims. Claims 8 and 9 ultimately depend from claim 6 and claim 6, as amended, includes subject matter not recited in Lee1, Joo and Watanabe. Hence, claims 8 and 9 are also allowable because there are no teachings in the Deng reference to correct the deficiencies found in the combination of Lee1, Lee2, Joo, and Watanabe.

Accordingly, for the amendments made to claim 6, the rejection of claims 8 and 9 have also been overcome and Applicant respectfully requests that the rejection be withdrawn

Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,



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Date: July 20, 2007

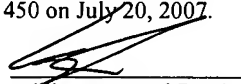
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(Signature and Date)